

## CLAIMS

1. Waveguide filter comprising at least one cavity (4) delimited by at least two inductive irises (7), characterized in that the filter  
5 furthermore comprises at least one floating insert (1) placed in one of the inductive irises.

2. Filter according to Claim 1, characterized in that the floating insert (1) is placed nearer to the edge of the iris (7) than to the centre  
10 of the iris (7).

3. Filter according to one of Claims 1 or 2, characterized in that it comprises at least one block (93 to 95) of dielectric foam inside the waveguide.  
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4. Filter according to Claim 3, characterized in that the floating insert (96, 97) is printed on the block (93, 95) of foam.

5. Filter according to one of Claims 3 or 4, characterized in  
20 that the foam has a relative dielectric constant of close to 1.

6. Filter according to Claim 5, characterized in that the foam is a polymethacrylate foam.

25 7. Process for manufacturing a waveguide filter in which a waveguide is made in two parts (90, 92), the waveguide comprising at least one cavity (4) delimited by two irises (7, 91), characterized in that before assembling the two parts (90, 92) of the waveguide, at least one block (93 to 95) of dielectric foam is placed inside the waveguide, and in that the block  
30 (93, 95) supports at least one metallization which forms at least one floating insert (96, 97).

8. Process according to claim 7, characterized in that the insert (96, 97) is made by a technique of printing on the foam.  
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